College of Engineering and Computing
The 2007-08 marked another year of exemplary accomplishments for our faculty and students in various fronts.

The College consists of one school (Computing and Information Sciences) and six departments (Biomedical Engineering, Civil and Environmental Engineering, Construction Management, Electrical and Computer Engineering, Industrial and Systems Engineering, and Mechanical and Materials Engineering). We offer 11 BS/BA, 14 MS and 7 PhD programs in various areas of engineering, computing, and construction. We also offer a number of global programs as well as dual degree programs.

The College has 124 faculty positions - 34 full, 35 associate and 31 assistant professors, and 24 instructors/lecturers. We welcomed 12 new faculty members in Fall 2007 – their brief bios are featured later in this report.

In what persistently defies the national trend, the College continued to enjoy a growth in its student body to now enroll a total of 4,367 (3,424 undergraduates, 733 masters and 210 doctoral) students. In 2007-08, we graduated a total of 868 students, conferring 502 baccalaureate degrees, 323 masters degrees, and 43 PhD degrees, the latter marking the largest in the young history of our doctoral programs.

Most of our programs now rank in the top 30 amongst their peers in sheer size of student body and degrees awarded. Topping the list, our MS in Construction Management is the largest in the nation. Our Computer Science ranked 8th amongst computer science programs in schools of engineering. Following the two, Computer Engineering, Industrial Engineering, Electrical Engineering, and Civil Engineering ranked 20th, 24th, 26th, and 29th, respectively [see ASEE 2007 Profiles of Engineering and Engineering Technology Colleges].

![College of Engineering and Computing Sponsored Research Awards 2005-2008](image)
Diversity of our student body has always been a source of pride and distinction for our College. We continue to be the top producer of Hispanic engineers at all levels from BS to PhD in the Continental US. But perhaps the untold story of our College is that we now rank 6th amongst all engineering schools in the nation in BS degrees awarded to African Americans, and 3rd in percentages of PhD degrees granted to women.

Our research enterprise maintained a steady growth. Research expenditures rose for the fourth consecutive year, now at $12.5M with 342 active awards. The new grants awarded during the year stood at $14.2M, or an average of $140K per tenured or tenure-track faculty. Our College ranked 5th amongst all engineering schools in the ratio of doctoral degrees to research expenditures, clearly reflecting the high productivity of our faculty [see ASEE 2007 Profiles of Engineering and Engineering Technology Colleges].

I invite you to take a look at the highlights of accomplishments of our faculty and students in various units of the College featured in this annual report. For more information, please visit the College website at www.cec.fiu.edu

Amir Mirmiran
Interim Dean
Biomedical Engineering
Our vision for the Biomedical Engineering at FIU is to become the premier program in Florida; and a nationally recognized model for serving the needs of the clinical medicine and the biomedical industries through workforce and technology development.

Of the eleven universities in the State University System (SUS) of Florida, FIU is the only university with the full slate (BS, MS, PhD) of programs in biomedical engineering. We offer BS, MS, and PhD degree programs as well as an undergraduate minor in biomedical engineering. Students who major in biomedical engineering, mechanical engineering, or electrical engineering may also enter the combined 5-year accelerated BS/MS program. Below, some highlights of the 2007-08 achievements for our faculty and students are presented.

Student Chapter Activities
Outside of the classrooms, BME students are active in their chapter with over 100 members. A few examples of recent activities of the student groups include: Raising funds to send students to every BMES Annual Fall Meeting since 2003. The FIU BMES has twice won the Fleetest Feet Award.

Each year BMES students volunteer and attend the International Symposium on Endovascular Therapy (ISET) in Miami. Each year the Chapter collaborates with different organizations around the school to organize numerous events including club fairs, academic fairs, social events, leadership seminars, and research seminars. The BMES also volunteers to participate in several special events that strengthen the College. During Engineers’ Week, the College hosts the annual Engineering Expo, an event that brings more than 1,000 Elementary, Middle, and High School students from public and private schools across Miami-Dade County to the Engineering Campus. In 2007 an Alpha Eta Mu Beta (AEMB) Biomedical Engineering Honor Society chapter was started at FIU.

BME Partnership Program
The Partnership Program provides the structural support to the clinical rotations and senior design projects for the baccalaureate program. The Partnership Program also provides opportunities for applied research to graduate students through the Collaborative Technology Innovation Program. This program connects BME faculty to the personnel from one of the Partner organizations and provides funding for joint projects that present the potential for discovery, innovation, invention, and future commercialization or other external funding.
Several prominent leaders in the medical and technology fields met on FIU’s campus during Enterprise Development Corporation’s annual Life Science Conference on April 24, 2008 hosted by the Biomedical Engineering Department. Using the theme “Leveraging Information Technology to Meet Today's Healthcare Challenges,” the conference brought more than 300 industry leaders together to explore how information technology meets today's healthcare challenges and also to bring South Florida's Life Science community together for meaningful collaboration.

The Department’s research programs are in the following areas:

- Biomechanics, biomaterials, medical devices, and bionanotechnology
- Bioinstrumentation and biosignal processing
- Drug delivery, tissue engineering, and systems biology
- Medical and molecular imaging and biomedical optics

### Fall Term Enrollment

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### Degrees Awarded

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### Sponsored Research Awards ($Millions)

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### BME Endowed Programs

The earnings of the endowment from the Wallace H. Coulter Foundation grant fund the following nine programs: Excellence Fund, Graduate Fellowships, Undergraduate Scholarships, Collaborative Technology Innovation Program, Research Center Fund, Eminent Scholars Chair and Professorship, Young Inventor Program, and Lecture Series.

The Lecture Series provided funds to offer fifteen (15) lectures during this past year.

### Faculty size and Research Focus

In 2007-2008 the Department had 8 faculty members (total of 7 FTE) at the rank of Assistant Professor and above (two are joint positions with Electrical and Computer Engineering). The department has two full time Instructors, one serving as the Undergraduate Advisor.
Computing and Information Sciences 2007-08 was another banner year for the School of Computing and Information Sciences (SCIS). The school continued to rise to a new level of excellence in all major areas, including publications, external research funding, PhD enrollment and graduation, overall student FTE and degree production, diversity and industry partnerships. With these accomplishments, the faculty and staff continued to drive the transformation of SCIS and established the school as a leading CS/IT education and research program in the State of Florida:

- SCIS has become one of the largest computer science and information technology program in the state in terms of student enrollment at BS, MS and Ph.D. levels, and the largest CS/IT program at the undergraduate level. (Data Source: State University System Board of Governors)

- SCIS has become a leading CS/IT research program in the state in terms of annual external funding received per tenured/tenure-track faculty member.

- We have become the national leader in training Hispanic Computer Science Ph.D. students, with over 13% of the total Hispanic CS Ph.D. student enrollment in US. (Data Source: Computing Research Association Annual Survey)

Research and External Funding
In 2007-08 we not only maintained a very high number of proposals activity, but also had a significant increase in the amount of research funding requested, which is an indication that our faculty are increasingly confident by pursuing large-scale and more competitive (hence more risky) opportunities, and that our faculty increasingly work in (multidisciplinary) teams, which is typically mandatory in large-scale competition.

Major Projects and Initiatives
- The Latin American Grid Consortium (LA Grid)
- NSF Partnership for International Research and Education (PIRE)
- State of Florida’s Hurricane Insured Loss Model
- Business Continuity Information Network (BCIN)
- NSF Major Research Instrumentation (MRI) award for geospatial data transformation and querying
- NSF Center of Research Excellence in Science & Technology (CREST)
Business Continuity Information Network (BCIN)
This project is aimed at using technology to support rapid business recovery from major natural or man-made disasters, particularly hurricanes. 2007-08 was the year that the project began to generate broad recognition and impact and was featured recently in Miami Herald. BCIN is a unique example of integrating technology, community partnership and the state-of-the-art research, with direct impacts on economy and community. We have developed and continued to expand partnerships with Miami-Dade County EOC, Palm Beach County EOC, Miami-Dade Mayor’s Office, IBM, Office Depot, Ryder Systems, Beckman Coulter, NCCI Holdings. The Miami-Dade and Palm Beach Counties EOCs have chosen this project as the designated technology of their disaster planning process.

Collaboration
The SCIS faculty has actively engaged in a wide range of collaborative efforts, which has become a critical driver to the SCIS research, funding and educational programs.

Our faculty have collaborated with their colleagues in the Colleges of Engineering and Computing, Arts & Sciences, Business Administration, and School of Hospitality.
Civil and Environmental Engineering
2007-08 was a busy year for the Department. In Fall 2007, Dr. Mirrnan, CEE Chair, was appointed as the Interim Dean of the College. Subsequently, Dr. Zhao became CEE Acting Chair. In Spring 2008, the University had to undergo a severe budget cut, which led to the closure of some centers and academic programs, among which was our Master of Science in Environmental and Urban Systems. The program is no longer accepting new students, but will allow existing students to graduate by April 2010.

The Department continued to move forward in both its education and research endeavors, realizing a continued increase in its enrollment. The faculty made significant effort to prepare for the ABET visit in Fall 2008. We maintained a healthy level of research funding, and looked for strengthening our relationship with Applied Research Center, International Hurricane Research Center, Metro Center, and other FIU centers and outside partners.

We reached a milestone with our first two graduates of the B.S. in Environmental Engineering. Commemorating their graduation, a tree planting ceremony took place at the Engineering Campus in December 2007, installing the Tree of Knowledge and the Tree of Discovery. This is an accomplishment of the environmental engineering faculty, under the leadership of Dr. Tansel.

Laboratory Improvements
The Department invested heavily in improving all of its educational labs. The surveying class received all new total stations to replace its out-of-date equipment. New instruments were purchased for the environmental engineering labs to further develop the lab courses to support the new BS program. A sedimentation studies apparatus was purchased for the fluid mechanics lab. The materials lab received a new beam apparatus. The Senior Design Computer Lab is now open 12 hours a day and is fully staffed.

Student Chapter Activities
In March 2008, the American Society of Civil Engineers (ASCE) Student Chapter competed with 25 other schools at the annual South Eastern Regional Student Competitions in Orlando. Our contingent of 50 students ranked 1st in Concrete Cylinder and in Mystery Competition, 3rd in Visual Display, and 5th in Plan Reading, for an overall ranking of 11th, up from 16th a year ago.

Under the guidance of Dr. Gan, our Student Chapter of the Institute of Transportation Engineers (ITE) was selected the best chapter internationally for its outstanding activities and achievements for the fifth time in the last seven years, amongst over 120 ITE student chapters worldwide. The Chapter was presented the award at the ITE Annual Meeting in Anaheim, CA in August 2008. Chi Epsilon, the National Civil Engineering Honor Society, conducted two inductions this year. Tau Chi Alpha, the National Environmental Engineering Honor Society inducted 17 students, faculty, and alumni in Spring.
Research Infrastructure
In April, Miami-Dade County granted accreditation to the Structures and Construction Laboratory (SCL), making it an official site for product testing and approval. Complementing the research at the SCL is the full-scale destructive testing research facility, known as the “Wall of Wind”, also located on the Engineering Campus. Improvements are being made to replace the turbine engines for the fans with electrical fans and higher wind speed capabilities. The Wall of Wind received $10 million award from the State of Florida in a highly competitive and peer-reviewed process.

In the transportation area, the Florida Department of Transportation District 6 Transportation Management Center (TMC) has teamed up with the Lehman Center for Transportation Research (LCTR) to support a new on-campus Intelligent Transportation Systems (ITS) Lab. The lab includes a video wall, central software, servers, and operator workstations that duplicates, albeit at a smaller scale, those that are used at the District 6 TMC.
Construction Management
The Department of Construction Management made significant accomplishments during the last year. Its Bachelors of Science in Construction Management program successfully went through the re-accreditation process. The program earned re-accredited status from the American Council for Construction Education (ACCE) for another six year period through 2013.

Enrollment in both bachelors and masters programs are at all time high, the total exceeding 500, with 320 undergraduate and 180 graduate students. The graduation rate also reached a record during this year, the total number exceeding 100. The online masters program has an enrollment of almost 300 students. The Department performed very well in attracting significant amount of scholarship (endowed and one-time) funds this year for its students.

The faculty members were active in publishing their research findings in reputed construction journals and conference proceedings.

The Department is in the midst of establishing a construction process laboratory for its undergraduate students and to recruit highly qualified faculty to expand its progress.

Florida Engineering Education Delivery System (FEEDS)
In 2005, the Department developed and implemented its FEEDS program in order to improve the quality of instruction and delivery of course materials. As a result enrollment in FEEDS sections were capped. The desired quality control measures were effective and the quality of FEEDS instruction was noted during last year’s re-accreditation visit.

Online Masters Program
The Department began offering graduate courses online for its Masters students. Two sections for each online course are offered, one for the in-state students and the other for the out-of-state students. Sufficient courses are offered within a four-semester cycle enabling students to graduate by taking all courses online. At present, approximately 100 students enroll in online classes in a typical term. About 65% of students are in-state.

Student Chapter Activities
Four student chapters are active in the Department: ABC (Associated Builders and Contractors), AGC (Associated General Contractors), National Association of Women in Construction (NAWIC), and
Sigma Lambda Chi Honor Society. ABC Student Chapter is the most active and works closely with the South Florida ABC. This student chapter participates in the National Construction Management Competition annually. In 2006 the ABC Student Chapter team won the National Grand Championship.

**Research and Scholarly Work**
The major thrust areas of research in the Department are as follows:

- Risk Management and Decision Making
- Sustainability and Green Construction
- Information and Communication Technology
- Infrastructure Systems and Management
- Safety and Health
- Construction Education

The faculty members are currently funded by the US and Florida Departments of Transportation, National Academy of Sciences, Korea Water Resources Corp., and ELECTRI International. The faculty members are also engaged in active publication. Drs. Ahmad and Ahmed organize an International Conference on Construction in the 21st Century each year at different location around the globe. Dr. Ahmad is also the Editor-in-Chief of the ASCE Journal of Management in Engineering and a member of the editorial board for the ASCE Leadership and Management in Engineering. Dr. Ahmed is Associate Editor of the ASCE Journal of Construction Engineering and Management.
DEPARTMENT OF ELECTRICAL AND
COMPUTER ENGINEERING

Electrical and Computer Engineering
In 2007-08, the Department of Electrical and Computer Engineering (ECE) continued its growth and exemplary accomplishments. As some faculty retired, there were new hires with a broad range of research and educational interests. The faculty continues to be involved in a balanced combination of research and teaching to fully benefit the students. A large number of our faculty has considerable industrial experience and many maintain active consulting roles to provide current and relevant knowledge to the students in classrooms and research labs. Our vision is to have the best undergraduate program in the State of Florida and to be internationally recognized with our graduate program driven by excellent research that responds to the needs of the State, in particular, and the nation in general. Furthermore, serving our community and maintaining our mission in providing excellence in undergraduate education would allow our graduates to become critical thinkers, creative problem solvers and life long learners. We are taking great strides towards another solid performance for the 2008 accreditation visit by ABET.

Instructional Facilities
The Department has continuously improved its undergraduate laboratory facilities through purchase of new equipment for a totally updated Systems Lab, Integrated Circuits and Electronics Lab, Microcomputer Lab, and Circuits and Logic Lab.

In addition, the LPKF ProtoMat S62 rapid printed circuit board (PCB) prototyping equipment was purchased. The rapid PCB Prototyping solution provides an easy fabrication method to compare alternative designs at the PCB level. Until now most student-designed circuits were implemented at the protoboard level without a practical way to minimize possible parasitic capacitive and inductive effects. The purchase of this equipment will allow more professionally designed senior design projects.

Student Chapter Activities
The IEEE Student Chapter has continued with another year of strong membership drive. The Chapter was recognized by the IEEE Member and Geographic Activities Board (MGA) as a recipient of the 2007 MGA Student Branch Membership Growth Award for their success in Outstanding Leadership and Results in IEEE Membership Development Activities for the IEEE Miami Section in Region 3. Furthermore, the IEEE Student Chapter participated in a hardware and software competition in the IEEE Southeast Conference (SECON) 2008 in Huntsville, Alabama in April, 2008, and ranked 3rd place in the event.
DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING

Our Kappa Delta Chapter of Eta Kappa Nu (HKN) continued its community service activities during the year. The new inductee meeting took place in February 2008. As a community service project, HKN assisted with the Engineering Expo, SHPE Brainbowl and Viva Technology.

Research
The Department’s research projects are funded through major governmental, institutional and corporate sponsors such as the National Science Foundation, NASA, the US Department of Defense, the Office of Naval Research, the US Air Force, the National Security Agency, the Department of Education, the Army Research Lab, and Motorola, amongst others. In 2007-08 the department was awarded $1.6 million in external research.

Electrical and Computer Engineering was the largest producer of Ph.D. graduates for the third year in a row in the entire College.
Industrial and Systems Engineering
The mission of the Department has always been to teach, conduct research, and serve the community through professional and technology development. The Department has always intended to constantly increase educational quality and opportunities for students that foster creativity, leadership, responsibility, the habit of individual inquiry, and the capacity for lifelong learning. The Department is also committed to providing graduates who improve the quality of life and meet the needs of the manufacturing and service industries. The Department strives to attain a level of research and scholarly productivity befitting a major research university and warranting national and international recognition for excellence.

2007-08 was a busy year for the department, filled with faculty and student accomplishments, some of which are highlighted here. In Spring 2008, the university had to undergo a severe budget cut mandated by the State. The cuts led to the closure of some centers and academic programs, among which were four of our programs (BS, MS and PhD in Industrial and Systems Engineering and MS in Technology Management). These programs will no longer accept new students. However, the University is committed to allow our existing student to complete their coursework and graduate by April 2010 with MS degrees and April 2011 with BS or PhD degrees.

Our PhD program is quite young, and we have so far graduated 4 students, although we did not graduate any PhD student in 2007-08. On the other hand, our undergraduate enrollment has dropped for the third year in a row. This past year, we granted 25 BS degrees, the smallest in the last 8 years. Amongst our three competing MS degree programs (EM, ISE, and TM), Engineering Management accounts for 86% of our MS degrees granted.

Research
In 2007-08, our faculty submitted a total of twenty new research grant proposals, of which eleven were awarded for a total of $575,000. These projects were funded by Cape Cole Inc., Nutrition Physician, Northrop Grumman, Innovative Scheduling, National Science Foundation, Bell Aerospace & Technologies Corp., Royal Caribbean Cruises, and Air Force Research Laboratory.

In 2007-08, our faculty published two books and book chapters, thirteen journal papers and 22 conference papers.
Student Chapter Activities
In December 2007, the INFORMS Chapter at FIU received the Student Chapter Annual Award Magna Cum Laude. The award is given to Chapters that have been active above and beyond the requirements set forth by INFORMS headquarters and that have maintained a steady growth in their level of membership. INFORMS is the Institute for Operations Research and the Management Sciences (INFORMS), which is the largest professional society in the world in the field of operations research. It was established in 1995 with the merger of the Operations Research Society of America (ORSA) and The Institute for Management Sciences (TIMS).

Future Plans
As the ISE programs will be phased out in the next three years, some adjustments may be necessary for our MS in Engineering Management. We plan to establish a new track in Enterprise Engineering that would also provide a research focus for our Engineering Management faculty members. The courses used in the Enterprise Engineering track may also be used for the certification program. The SAP software can provide hands-on experience for our Engineering Management students. We also plan to expand our training and extension programs in Lean Manufacturing, ISO Certification, and Process Improvement.
Mechanical and Materials Engineering
Department of Mechanical Engineering was transformed into Department of Mechanical and Materials Engineering (MME) in 2002 when a concentrated effort began to hire a group of faculty in the general area of materials science and engineering. In August 2003, a group of MME faculty that worked in the general areas of biomedical engineering and chemical engineering formed a separate Department of Biomedical Engineering.

2007-08 marked another year of accomplishments for our faculty and students. While overall student headcount remained strong, the biggest gain was among master students, which reached an all-time high. The Department graduated 8 PhD students, also the largest in the young history of our PhD program. Four of the PhD graduates were offered faculty positions - two at Indian Institute of Technology in India, one at Middle Eastern Technical University in Turkey, and one at the University of Trinidad and Tobago.

Research Labs
The Department is home to several prominent research facilities:

**AMERI -** Advanced Materials Engineering Research Institute specializing in nano-technology, nano-fabrication, biosensors, carbon nanotubes and nanowires, micro fuel cells and batteries, electronic materials, ceramics, polymers, biomaterials, metals and alloys, and composite materials.

**BEECS -** Building Energy, Environment and Conservation Systems Laboratory providing a unique Air-Conditioning Educational Certificate program offered to traditional and non-traditional students who wish to pursue their engineering careers in heating/ventilation and air conditioning related industries.

**CESMEC -** Center for the Study of Matter under Extreme Conditions specializing in developing and testing new materials for ultra high temperatures and pressures.

**MAIDROC -** Multidisciplinary Analysis, Inverse Design, Robust Optimization and Control Laboratory with its 128-processor parallel computer emphasizing computational interdisciplinary integration of fields involving fluid mechanics/aerodynamics, heat transfer, stress/deformation fields, electromagnetics, and chemistry.

**PLASMA DEPOSITION LABORATORY** provides excellent experimental research facilities for hot and cold plasma deposition, thermal barrier coating, anti-corrosion coating, bulk metallic glasses manufacturing and characterization.
Research
Owing to a large grant from the Air Force, the Department ranked first in the College with $3.7M of new research awards, also reflecting a departmental record. A number of faculty members, including Professors Choi, Jones, Wang, and Wu have filed for patents for their breakthrough work.

Faculty
In Fall 2007, Dr. Cesar Levy was appointed as Associate Dean for Academic Affairs and Undergraduate Studies to lead the efforts for the ABET accreditation in the College. In Spring 2008, Dr. Yong Tao was appointed as Associate Dean for Business and Entrepreneurship Development. Dr. Norman Munroe has been recently appointed as Director of Research for the Applied Research Center (ARC).

Collectively, the MME faculty serve as editor or associate editor for 18 journals in their field. Also, 6 MME faculty are fellows of at least one society or organization in their respective fields.
List of Newly Hired Faculty 2007-08

School of Computer and Information Sciences
1. Dr. Xiaowen (Jason) Liu – Assistant Professor
2. Dr. Christine Lisetti – Associate Professor
3. Dr. Rafae Bhatti – Assistant Professor

Civil and Environmental Engineering
1. Dr. Girma Bitsuamlak – Assistant Professor

Industrial and Systems Engineering
1. Dr. Marcus Perry – Assistant Professor

Mechanical & Materials Engineering
1. Dr. Jiuhua Chen – Associate Professor
2. Dr. Igor Tsukanov – Assistant Professor

Electrical and Computer Engineering/IT 2
1. Dr. Stravos Georgakopoulos – Assistant Professor
2. Dr. Deng Pan – Assistant Professor

Electrical and Computer Engineering
1. Dr. Wilmer Arellano – Instructor
2. Dr. Jeffrey Fan – Assistant Professor
3. Dr. Zesheng Chen – Assistant Professor
Jason Liu received a B.A. degree in Computer Science from Beijing University of Technology in China in 1993, and M.S. in Computer Science from College of William and Mary in 2000, and a Ph.D. in Computer Science from Dartmouth College in 2003. He served one year as a post-doctoral research associate at the Coordinated Sciences Laboratory at the University of Illinois, Urbana-Champaign. Since 2004, he has been an assistant professor in the Department of Mathematical and Computer Sciences at the Colorado School of Mines, where he received the NSF CAREER Award. His research interests include parallel discrete-event simulation, high-performance modeling and simulation of communication networks and computer systems. His current research focuses on applying real-time computation techniques for adaptive network simulation models, designing and building scalable emulation infrastructure for studying large-scale networks.

Dr. Rafael Bhatti
Assistant Professor

Dr. Bhatti will join the School of Computing and Information Sciences at FIU in Fall of 2007. He has received his PhD from the School of Electrical and Computer Engineering at Purdue University in 2006. Currently, he is a post doctoral researcher at IBM Almaden Research Laboratory. His research interests include information systems security, with emphasis on design and administration of access management policies in distributed systems. His research has appeared in many prestigious journals such as ACM Transactions on Information and System Security, IEEE Transactions on Software Engineering and IEEE Computer.
Dr. Christine Lisetti
Associate Professor

Dr. Christine Lætitia Lisetti is an Associate Professor in the School of Computing and Information Sciences at Florida International University. She was a Post-Doctoral Fellow at Stanford University (California, USA) jointly in the Department of Computer Science and the Department of Psychology from 1996 to 1998. She received her Doctorate (Ph.D.) in Computer Science in 1995 from Florida International University (Florida, USA). Christine Lisetti is interested in computational modeling of emotion and affective processes, with the overall goals to enhance human-computer interaction (HCI) and human-robot interaction (HRI) by developing socially and affectively intelligent artificial agents.

She is the author of numerous scientific journal articles and a total of over 60 technical publications.

She has won multiple research awards, including the US National Institute of Health (NIH) Individual Research Award, the American Association for Artificial Intelligence (AAAI) Nils Nilsson Award and the AAAI Technical Innovation Award (jointly with Prof. Robin Murphy, Computer Science, USF), the Computing Research Association (CRA-W) Distributed Mentoring Affiliate Award, the University of Central Florida (UCF) College of Engineering and Computer Science Distinguished Research Lecturer Award, and more recently the European Commission (EC) Marie-Curie International Reintegration Fellowship. She is the author of over 70 scientific articles and is regularly invited to participate in major international conferences.

In the United States from 1996 to 2003, she was the Principal Investigator (PI) of multiple research grants, funded by US Federal Funding Agencies such as the National Institute of Health (NIH), the Office of Naval Research (ONR), the US Army Stricom Agency, NASA Ames, and by industrial companies such as Intel Corporation and Microsoft Interval Research Corporation.
Civil & Environmental Engineering:

Dr. Girma Bitsuamlak  
Assistant Professor

In partnership with FIU International Hurricane Research Center (IHRC), CEE expands once again in the area of wind engineering and wind/structure interaction, and hires a wind tunnel expert from the internationally known firm, Rowan William Davies & Irwin (RWDI), Inc.

Dr. Girma Tsegaye Bitsuamlak has worked with RWDI for 3 years, executing more than 70 induced structural responses and cladding wind load studies for tall buildings and large span roofs in the boundary layer wind tunnel near Toronto, Canada. His notable projects include Freedom Tower, Yankee Stadium, Kowloon Union Square (Hong Kong), Moscow City Site 14 Tower (Moscow), 3344 Peach Tree Tower (Atlanta), Elite Tower (Dubai), Villa Magna Towers (Miami), and China Steel Head Quarter (Taiwan).

Dr. Bitsuamlak received his doctoral degree from Concordia University in Montreal in 2004 on “Evaluating the effect of topographic elements on wind flow: A combined numerical simulation-neural network approach”. His Masters degree was on “Application of artificial neural network for determination of wind pressure distribution in buildings” from the Indian Institute of Technology. He received his BS degree from the Addis Ababa University in Ethiopia.

Industrial and Systems Engineering:

Dr. Marcus B. Perry  
Assistant Professor

Dr. Perry received his Ph.D. in Industrial Engineering from Florida State University in 2004. Prior to joining FIU, he served as an Assistant Professor of Operations Research at the Air Force Institute of Technology. His primary teaching and research interests include statistical process control, time series analysis, regression analysis, design and analysis of experiments, and response surface methodology. More recently, Dr. Perry has been involved in the development of statistical models for the analysis of social networks, with application to clandestine networks. He is currently the author of eight peer-reviewed journal papers and serves on the Editorial Board of Quality Engineering.
Mechanical and Materials Engineering:

Dr. Igor Tsukanov
Assistant Professor

Dr. Tsukanov received his Ph.D. degree from the Institute for Problems in Machinery of Ukrainian National Academy of Sciences in 1997. He is an expert in Computational Mechanics, particularly in generalized finite element and meshfree engineering analysis methods. His research interests also include multiscale/multiresolution & multiphysics applications, as well as development of computer systems and tools for automated engineering analysis. Dr. Tsukanov is an author of 17 journal papers, 13 conference papers, 2 patents, and had 20 conference presentations. In 2007 he received the Most Cited Paper Award for the article “Heterogeneous material modeling with distance fields” published in the Computer Aided Geometric Design journal. The paper “Parametric and topological control in shape optimization”, which Dr. Tsukanov co-authored, won the Best Paper Award at the 2006 ASME International Design Engineering Technical Conference. He was a recipient of the Ukrainian National Academy of Sciences Scholarship (1995, 1996) and Soros Fellowship/Grant under the International Soros Science Education Program (1995).

Dr. Jiuhua George Chen
Associate Professor

Dr. Chen received his PhD in 1994 from the Graduate University for Advanced Studies in Japan and postdoc training at the State University of New York at Stony Brook. Before joining FIU, he worked as a Research Professor, and served as a Deputy Director of Mineral Physics Institute, an Associate Dean of Admissions at SBU and a PI of the High Pressure DAC facility at National Synchrotron Light Source of Brookhaven National Laboratory. Dr. Chen’s research interests include structures of solids and liquids, phase transitions, elasticity, plasticity and rheological properties, syntheses of nanostructured materials, superhard materials, ceramic and hydrogen storage materials. He has over 120 publications in scientific journals (including Nature and PRL) and conferences. He also serves in Editorial Board of The Open Mineralogy Journal.
Dr. Deng Pan  
Assistant Professor

Deng Pan received his Ph.D. in Computer Science from the State University of New York at Stony Brook in 2007, under the supervision of Dr. Yang. His research interests include high performance switch architectures, high speed networking, and network security. He has published over ten peer-reviewed papers in leading refereed journals and conferences, including the IEEE Transactions on Computers, Infocom, ACM/IEEE Symposium on Networking and Communications, IEEE International Parallel and Distributed Processing Symposium, and International Conference on Parallel Processing. He also held industry positions in VoIP software development, Linux kernel module development, and network software testing, including a year long internship with Symbol Technologies Inc.

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